

Mineral Industry Surveys

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TUNGSTEN IN SEPTEMBER 1999

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was 9% lower during January through September of 1999 than net production during the same period in 1998, according to the U.S. Geological Survey.

U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during the first 9 months of 1999 was 15% lower than that of the same period in 1998. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for September 1999 will be published in a subsequent issue.

Note

All data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Update

On November 10, the Defense National Stockpile Center (DNSC) announced that it did not award any tungsten ores and

concentrates as a result of its October 26 bid opening (Defense National Stockpile Center, 1999). The next bid opening for tungsten ores and concentrates will be on January 25, 2000. Further information on DNSC's tungsten sales program, is available from Phyllis Shockley, contracting officer, at (703) 767-5482.

Prices for tungsten ore concentrates in dollars per metric ton unit from Metal Bulletin are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO_3) content of 65%. The prices for October 1 to 31 are as follows:

Low—\$38/metric ton unit WO_3 (\$34/short ton unit WO_3)

High—\$48/metric ton unit WO_3 (\$44/short ton unit WO_3)

Reference Cited

Defense National Stockpile Center, 1999, Stockpile makes no award of tungsten ores & concentrates: Fort Belvoir, VA, Defense National Stockpile Center news release, November 10, 1 p.

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate			Reported scrap consumption	Intermediate products		
	Reported consumption	Imports for consumption	Stocks, end of period 2/		Net production 3/	Reported consumption 4/	Stocks, end of period 5/
1998:							
September	377	115	554	252	814	770	1,330
October	W	108	787	302	723	746	1,360
November	W	158	503	223	680	703	1,400
December	449	811	514	178	621	614	1,340
January-December 6/	3,210	4,750	XX	3,300	9,630	8,980	XX
1999:							
January	W	129	519	250	732	684 r/	1,330
February	W	156	509	267	727	686 r/	1,340
March	365	714	490	253	791	687 r/	1,390
April	381	90	449	247	762	626	1,330
May	392	383	447	241	766	624 r/	1,360
June	358	662	W	251	782	610 r/	1,300
July	362	232	481	242	751	653 r/	1,320
August	387	145	488	250	776	636 r/	1,330
September	387	NA	488	249	811	651	1,310
Total 6/	2,630	NA	XX	2,250	6,900	5,860	XX

r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Reported by consumers.

3/ Net production of tungsten metal powder, tungsten carbide powder, chemicals, and other products.

4/ Includes estimates and scrap.

5/ Reported by producers.

6/ Does not include withheld data.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1998:			
September	W	751	531
October	W	796	552
November	W	414	586
December	W	718	603
January-December 3/	838	9210	XX
1999:			
January	W	781	621
February	W	715	566
March	W	786	523
April	W	704	521
May	W	710	541
June	W	W	634
July	W	803	556
August	W	701	548
September	W	769	505
Total 3/	W	5970	XX

W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Producers and consumers.

3/ Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS 1/

(Metric tons, tungsten content)

Product	Net production 2/				Stocks at end of period		
	1999			Year to date	1999		
	1998	August	September		1998	August	September
Metal powder	4,600	374	400	3,270	719	708	686
Tungsten carbide powder (made from metal powder)	5,040	402	411	3,630	576	557	557
Cast and crystalline carbide powder; other	W	W	W	W	W	W	W
Chemicals	W	W	W	W	46	67	66
Total 3/	9,630	776	811	6,900	1,340	1,330	1,310

W Withheld to avoid disclosing company proprietary data; not included in total.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross production less quantity used to make other products in table.

3/ Does not include withheld data.

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 1999 1/ 2/ 3/

(Metric tons, tungsten content)

End use	August	September	Year to date
Steel:			
Tool	W	W	W
Other	9 r/	25	127
Superalloys	28	29	276
Other alloys (excludes steels and superalloys) 4/	W	W	W
Cemented carbides 5/	442 r/	441	4,070
Mill products made from metal powder	107 r/	107	953
Chemical uses	W	W	W
Miscellaneous and unspecified	50 r/	50	434
Total	636 r/	651	5,860

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

5/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/ 2/ 3/

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Scheelite (natural, synthetic)	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:							
1998:							
September	44	139	534	--	45	8	770
October	40	106	552	--	40	8	746
November	39	66	555	--	35	8	703
December	41	62	468	--	35	8	614
January-December	493	1,370	6,560	--	460	97	8,980
1999:							
January	43	108	490 r/	--	34	10	684 r/
February	43	110 r/	491 r/	--	33	9	686 r/
March	45	115 r/	488 r/	--	30	9	687 r/
April	43	116	432	--	25	9	626
May	45	118 r/	422	--	30	9	624 r/
June	41	114 r/	419	--	27	10	610 r/
July	41	118 r/	456	--	28	10	653 r/
August	41 r/	115 r/	449	--	21 r/	10	636 r/
September	55	117	448	--	21	9	651
January-September	397	1,030	4,100	--	249	84	5,860
Stocks:							
1998:							
September	16	28	497	--	41	16	598
October	18	18	523	--	52	16	626
November	15	18	514	--	41	16	604
December	18	17	431	--	36	16	517
1999:							
January	29	25	416	--	28	17	514
February	25	22	403	--	32	16	498
March	27	26	419	--	26	17	515
April	26	24	410	--	20	17	497
May	27	19	406	--	20	18	490
June	33	18	404	--	19	20	493
July	31	20	414	--	18	18	501 r/
August	36	22	401	--	24 r/	17	500 r/
September	19	25	399	--	25	17	484

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro- tungsten	Metal powder	Tungsten carbide powder	Other 2/	Total	Total year to date
1998	4,750	1,920	599	459	944	3,110	11,800	XX
1999:								
June	662	144	56	48	87	392	1,390	5,740
July	232	108	42	24	61	250	1,810	6,460
August:								
Australia	--	--	--	--	--	--	--	167
Austria	--	--	--	--	--	1	1	23
Belgium	--	--	--	(3/)	--	--	(3/)	2
Bolivia	14	--	--	--	--	--	14	206
Burma	--	--	--	--	--	--	--	91
Canada	--	--	--	(3/)	35	--	35	293
China	--	149	71	12	4	284	520	3,570
Czech Republic	--	--	--	--	--	--	--	(3/)
Estonia	--	--	--	--	--	--	--	(3/)
France	--	--	--	--	--	(3/)	(3/)	2
Germany	--	--	--	3	1	4	8	181
Hong Kong	--	--	--	--	--	--	--	1
Hungary	--	--	--	--	--	(3/)	(3/)	7
India	--	--	--	--	--	--	--	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	3	--	1	4	64
Italy	--	--	--	--	--	--	--	(3/)
Japan	--	--	--	1	1	3	5	29
Kazakhstan	--	--	--	--	--	--	--	461
Korea, Republic of	--	--	--	(3/)	--	(3/)	(3/)	10
Luxembourg	--	--	--	--	7	--	7	34
Mexico	--	--	--	--	--	(3/)	(3/)	27
Mongolia	--	--	--	--	--	--	--	23
Netherlands	--	--	--	--	--	(3/)	(3/)	1
Peru	--	--	--	--	--	--	--	11
Portugal	31	--	--	--	--	--	31	216
Russia	86	--	15	--	--	59	160	1,670
Rwanda	14	--	--	--	--	--	14	27
Singapore	--	--	--	--	--	--	--	(3/)
South Africa	--	--	--	--	--	--	--	(3/)
Spain	--	--	--	--	--	--	--	(3/)
Sweden	--	34	--	--	--	(3/)	34	34
Switzerland	--	--	--	--	--	1	1	3
Taiwan	--	--	--	--	--	--	--	(3/)
Thailand	--	--	--	--	--	--	--	11
United Kingdom	--	--	--	--	--	(3/)	(3/)	134
Total	145	183	86	20	47	354	834	7,290
Total, year to date	2,510	1,390	511	207	512	2,160	7,290	XX

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in August 1999 totaled 277 metric tons, tungsten content.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates 2/	Ammonium tungstates	Metal powder 2/	Tungsten carbide powder	Other 3/	Total	Total year to date
1998	10	287	851	1,240	467	2,860	XX
1999:							
June	2	--	40	23	43	108	1,060
July	13	45	38	70	56	222	1,280
August:							
Argentina	--	--	--	--	--	--	1
Australia	--	--	5	1	1	7	16
Austria	--	--	--	--	--	--	9
Belgium	--	7	--	(4/)	(4/)	7	137
Bolivia	--	--	--	--	--	--	1
Brazil	--	--	1	1	1	3	35
Canada	--	--	3	28	4	35	180
Chile	--	--	--	(4/)	--	(4/)	3
China	--	--	--	--	(4/)	(4/)	2
Congo (Kinshasa)	--	--	--	--	--	--	8
Czech Republic	--	--	--	--	--	--	5
Denmark	--	--	--	--	--	--	7
Ecuador	(4/)	--	--	--	--	(4/)	(4/)
Finland	--	--	--	--	--	--	1
France	--	--	8	--	(4/)	8	53
Germany	(4/)	--	12	22	18	53	420
Hong Kong	--	--	--	--	--	--	29
Hungary	--	--	--	--	1	1	6
India	--	--	--	--	3	3	34
Indonesia	--	--	--	--	--	--	1
Ireland	1	--	--	(4/)	(4/)	1	8
Israel	--	--	(4/)	--	(4/)	1	45
Italy	--	--	1	2	(4/)	3	66
Japan	(4/)	--	12	(4/)	4	17	59
Korea, Republic of	--	--	(4/)	1	(4/)	2	15
Luxembourg	--	--	--	3	--	3	4
Malaysia	--	--	--	--	--	--	1
Mexico	--	--	1	(4/)	3	5	37
Netherlands	--	--	5	--	2	7	73
New Zealand	--	--	(4/)	--	--	(4/)	(4/)
Panama	--	--	1	--	--	1	1
Poland	--	--	--	--	--	--	2
Singapore	--	--	(4/)	(4/)	(4/)	(4/)	6
South Africa	--	--	--	(4/)	--	(4/)	19
Spain	--	--	(4/)	--	--	(4/)	6
Sweden	--	--	--	--	(4/)	(4/)	70
Switzerland	--	--	5	--	(4/)	5	21
Taiwan	--	--	1	(4/)	(4/)	1	15
Thailand	1	--	--	--	--	1	1
Turkey	--	--	--	--	--	--	1
United Kingdom	1	--	3	1	2	6	51
Venezuela	--	--	(4/)	--	--	(4/)	2
Other	--	--	--	--	(4/)	(4/)	1
Total	3	7	60	59	40	169	1,450
Total, year to date	21	102	487	504	339	1,450	XX

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Tungsten content estimated from reported gross weight.

3/ Includes wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in August 1999 totaled 120 metric tons, tungsten content.

Source: Bureau of the Census.